

BRUK, I.I., inzh.

Adjustment of medium-pressure boilers for low-pressure steam
generation. Prom. energ. 17 no.12:10-13 D '62. (MIRA 17:4)

BRUK, I. I.

Waste-heat boilers of open-hearth and heating furnaces in steel
and iron works. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.
i tekh.inform. 16 no.5:36-42'63. (MIRA 16:7)
(Boilers)

KONKIN, V.D.; BIUK, I.L.

Rapid photocolerimetric method for the determination of
phosphorus in steel during the smelting process. Stor.
trud. UNIM no.11:383-386 '65.

(MIRA 18:11)

BRUK, I.M.

Adaptation of a standard transport machine for mechanization of loading-unloading
operations in a glass factory
Stek. i ker. 9 no.5, 1952

BRUK-L.M.

✓Vertical drawing of glass pipes without debitsuse. I. B. SHAPIRO, G. V. POTOTSKAYA, I. M. BRUK, D. V. ZALIZNYAK, AND E. P. MISL'NIK. *Steklo i Keram.*, 12 (6) 4-8 (1965).—Details of technology and the characteristics of 4- and 6-in.-pipes are given. B.Z.K.

MT

(4)

SOV/28-58-6-16/34

AUTHORS: Savitskiy, M.R., Candidate of Technical Sciences,
Bruk, I.M., Engineer

TITLE: A Device for the Determination of Optical Distortions in Sheet Glass (Pribor dlya opredeleniya opticheskikh iskazheniy listovogo stekla)

PERIODICAL: Standartizatsiya, 1958, Nr 6, pp 57-58 (USSR)

ABSTRACT: Unpolished glass produced by vertical stretching is of unequal thickness which causes optical distortions. If the line of vision is perpendicular to the surface of the glass, there is usually no, or only a slight, deviation. At sharp angles, the distortions become greater. The angle under which vision is still possible is the criterium for the optical quality of the glass. Devices for this determination did not exist. Now the Laboratory of Standardization of the State Institute of Glass has developed an apparatus (Figure 1) in which a diaphragm with

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SOV/28-58-6-16/34

A Device for the Determination of Optical Distortions in
Sheet Glass

a slit is placed between the eye and the glass sheet. The slit is moved across the glass to test the whole surface. A mechanism turns the sheet and the diaphragm synchronically (Figure 2). The device may also be used for polished glass. The precision of the readings is very high ($\pm 1-2^\circ$). There are 2 diagrams.

ASSOCIATION: Gosudarstvennyy institut stekla (State Institute of Glass)

Card 2/2

BRUK, I.S.

O mekhanicheskom pribore dlya resheniya obshchennykh differentsial'nykh uravneniy. Zh. Avtomat. i Telemekh. 3 (1936), 143-152.
Mashina dlya integrirvaniya differentsial'nykh uravneniy. M.-L., IZD. AN (1941), 1-44.

30: Mathematics in the USSR, 1917-1947.
edited by Kurosh, A.G.,
Markushevich, A.I.,
Rashevskiy, P.K.
Moscow-Leningrad, 1948

BRUK, Isaak Semenovich

"A Machine for Integrating Differential Equations," (Mashina dlya integrirovaniya differentsial'nykh uravneniy), Moscow-Leningrad, 1941

Bol'shaya Sovetskaya Entsiklopediya, Vol. VI, 2nd ed., Moscow, 1949

BRUK, I. S., HARKOVICH, I. M.

Cor. Mbr., Acad Sci USSR(21943-)

"On the Question of the Criterion, and the Calculation of Inertia in Estimates of Static Stability," Iz. Ak Nauk SSSR, Otdel, Tekh, Nauk, No. 5-6, 1943.

BR-52059019

BRUK, Isaak Semenovich

"The Stability of Electrical Systems," Elektrichestvo, 1945, No. 9.

Bol'shaya Sovetskaya Entsiklopediya, Vol. VI., 2nd ed., Moscow, 1949

BRUK, I. S.,

"Equivalent schemes for Electric Circuits with Periodic Parameters,"
Doklady Akad. Nauk, 3, 1946.

BRUK, I. S.,

"A Mechanical Device for the Approximate Solution of Poisson-Laplace Equations," Comptes Rendus (Doklady), Vol. LIII, No. 4, 1946.

Corresponding Member of the Academy.

BRUK, I. S.

Brak, I. S. A device for the solution of ordinary differential equations. C. R. (Doklady) Acad. Sci. URSS (N.S.) 53, 523-526 (1946).

This is a preliminary announcement of a device which is to be described in further detail later. An electronic procedure is described for obtaining solutions of ordinary differential equations by a method similar to that used in the differential analyzer. The independent variable is a sinusoidal function of time and is used to control the horizontal sweep of a cathode-ray oscilloscope. Although the basic integrating circuit is limited to integration with respect to time, it is possible to integrate with respect to any other variable by writing the integral in the form $\int y d\phi = \int y(d\phi/dt)dt$. The necessary multiplication is performed in a balanced modulator. Initial conditions are introduced by means of a potentiometer in synchronism with the independent variable.

The output voltage which represents the dependent variable of the equation is used to control the vertical motion of the cathode-ray oscilloscope, and the combination of this deflection and the horizontal deflection produced by the independent variable produces a stationary pattern on the oscilloscope which is the desired solution for the particular initial conditions used. Functions are introduced by producing them as the solutions of auxiliary differential equations by methods similar to those used with a differential analyzer.

While the device described is of relatively low accuracy, it produces solutions very rapidly. There are many problems in which its precision is adequate, and in other problems where better final results are desired the device can be used for rapid exploration in order to determine regions of interest.

S. H. Caldwell (Cambridge, Mass.).

Source: Mathematical Reviews,

Vol 8, No. 5

BRUK, I. S.,

"Fluctuations of Synchronoous Motors," Doklady Akad. Nauk SSSR, Nova Ser,
Vol.LVII, No. 1, July 1947.

BRUK, I. S.,

"Alternating Current Calculating Table," Elektrichestvo, No.1, 1948.

BRUK, Isaak Semenovich, CHUGUNOV, S. S., PAUTIN, N. V.,

Vol. 9,
"Electronic Frequency Regulator," Avtomat i Telemekh, No. 2, Moscow, p. 144-51
March-April, 1948 (7 pp).

BRUK, I. S.,

"An Electronic Minimizer," Doklady Akad. Nauk SSSR (N. S.) 62, 481-484,
1948.

BRUK, I. S.,

"Automatic Distribution of Operating Loads in an Electrical Power System,"
Elektrichestvo, No. 1, 1949.

LIBKIND, M.S.; BRUK, I.S., chlen-korrespondent.

Subharmonic oscillations in a simple series circuit. Izv. AN SSSR Otd. tekhn. nauk no. 9:1248-1261 S '53. (MLRA 6:10)

1. Akademiya nauk SSSR (for Bruk). (Electric circuits) (Oscillations)

GORUSHKIN, V.I.; ZUBKOV, I.P.; BRUK, I.S., chlen-korrespondent.

Increasing the stability of synchronous generators by controlling the excitation followed by rotor slips and accelerations. Izv.AN SSSR Otd.tekh.nauk no.9:1262-1281 S '53. (MLRA 6:10)

1. Akademiya nauk SSSR (for Bruk).

(Dynamos--Alternating current)

BRUK, I.S.

Automatic control machines. Priroda 44 no.5:17-26 My '55.
(MLBA 8:7)

1. Chlen-korrespondent Akademii nauk SSSR
(Automatic control) (Calculating machines)

BELOUSOV, Solomon L'vovich; BRUK, I.S., otvetstvennyy redaktor; AUZAN, N.P.,
tekhnicheskiiy redaktor ~~otvetstvennyy redaktor~~

[Tables for normed additive Legendre polynomials] Tablitsy normirovan-
nykh prisoedinennykh polinomov Lezhandra. Moskva, Izd-vo Akademii nauk
SSSR, 1956. 379 p. (MLRA 9:7).

1. Chlen-korrespondent AN SSSR (for Bruk)
(Polynomials--Tables, etc.)

BRUK, I.S.

M-2 high-speed electronic calculating machine. Elektrichestvo no.9:
S '56. (MLRA 9:11)

1. Chlen-korrespondent Akademii nauk SSSR. 2. Energeticheskii
institut imeni Krzhizhanovskogo Akademii nauk SSSR.
(Electronic calculating machines)

BRUK, I.S.(Moskva); LENOV, N.N.(Moskva)

Electronic differential analyzer designed by the G.M.Krzhizhanski
Power Institute of the Academy of Sciences of the U.S.S.R. Avtem.i
telem.17 no.3:217-227 Mr '56. (MIRA 9:7)
(Electronic calculating machines)

BRUK, I. S.

Machine and body. Znan.sila 31 no.7:37-38 J1 '56. (MLRA 9:9)

1.Chlen-korrespondent Akademii nauk SSSR.
(Cybernetics)

SOV/112-58-1-807

Translation from: Referativnyy zhurnal, Elektrotehnika, 1958, Nr 1, p 119 (USSR)

AUTHOR: Brak, I. S.

TITLE: Prospects of Computer-Type Controllers in Automation of Industry
(Perspektivy primeneniya upravlyayushchikh mashin v avtomatizatsii)

PERIODICAL: V sb.: Sessiya AN SSSR po nauchn. probl. avtomatiz. proiz-va,
1956. Plenarn. zasedaniya, Moscow, AS USSR, 1957, pp 131-148, discus.,
pp 148-161

ABSTRACT: The history of automation and its interdependence with the development of production technology, particularly military technology, is briefly outlined. Today's stage of automation is characterized by the use of digital computers as controlling devices that can function at a rate of 30,000 or even 200,000 operations per second. Application of digital devices, as the most modern system of information conversion, has materially influenced both instrument construction and means of automation. Controlling computers can produce the greatest effect in such places where a great "carrying capacity"

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SOV/112-58-1-807

Prospects of Computer-Type Controllers in Automation of Industry

in converting information is necessary, unobtainable by the human being. Controlling computers differ from electronic mathematical computers in that they should not only react to a definite logical sequence of the "if ... then" type, but should also possess a memory enabling them to juxtapose past with present, to foresee the future by means of extrapolation, and to take notice of chance effects. As examples of efficient application of controlling computers, their application may be cited in the modern air force, in complicated power systems, and in other domains where, because of a rapid succession of events, man cannot react quickly enough to the transpiring changes, where the "carrying capacity" of the human brain is inadequate. Automation and use of controlling computers look promising in various branches of the governmental machine, particularly in scientific optimum planning. Controlling machines would secure timely processing of statistical data which, because of large-scale work involved, is usually delayed. With a ramified system of controlling computers available, it will be possible, in the course of planning, to tentatively set a

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SOV/112-58-1-807

Prospects of Computer-Type Controllers in Automation of Industry

level for one branch of the national economy and quickly determine effects on other branches of the economy. It is emphasized that application of controlling computers to automation of certain functions in the governmental apparatus and in industry, along with automation in the production processes, would secure a better realization of the advantages of the Soviet system.

Yu. S. V.

AVAILABLE: Library of Congress

1. Industrial plants--Automation
2. Digital recording systems
- Applications
3. Instruments--Calibration

Card 3/3

BELYNSKIY, V.V., inzh.; DOLKART, V.M., inzh.; KAGAN, B.M., kand. tekhn. nauk;
LOPATO, G.P., inzh.; MATYUKHIN, N.Ya., inzh.; BRUK, I.S., red.; MORD-
VINOVA, N.P., inzh., ved. red.; SHTEYNBOK, G.Yu., inzh., red.; FOMI-
CHEV, P.M., tekhn. red.

[Small M-3 electronic computer] Malogabaritnaya elektronaya vychislitel'naya mashina M-3. Moskva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1957. 86 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt, tema 40) (MIRA 14:11)

1. Chlen-korrespondent AN SSSR (for Bruk).
(Electronic calculating machines)

BRUK I S.

KARTSEV, M.A.; ALEKSANDRIDI, T.M.; KNYAZEV, V.D.; TANETOV, G.I.; LEGEZO, L.S.;
LAVRENYUK, Yu.A.; SHEHUROV, A.I.; BRUSENTOV, N.P.; KUZNETSOVA, V.P.;
~~BRUK, Isak Semenovich, red.; BEZBORODOV, Yu.M., red.; GAVRILOV,~~
S.S., tekhn.red.

[The M-2 high-speed calculating machine] Bystrodeistvuiushchaia
vychislitel'naia mashina M-2. Moskva, Gos. izd-vo tekhniko-teoret.
lit-ry, 1957. 228 p. (MIRA 11:3)

1. Chlen-korrespondent AN SSSR (for Bruk)
(Electronic digital computers)

1721. PROBLEMS CONCERNING THE AUTOMATIC CONTROL
OF POWER SUPPLY SYSTEM OPERATION AND POSSIBILITIES
ARISING FROM THE APPLICATION OF COMPUTER TECHNIQUES.

I.S. Bruk

Elektricheskoye, 1957, No. 12, 31-4. In Russian.

General discussion on the establishment of the most economical working conditions for a multi-station (mixed hydroelectric and thermal generators) power system such as that existing in European Russia. Economies can be effected by an automatic control system consisting of (1) automatic transducers to convert information normally read from meters into a pulse code, (2) multiplex transmission of the information to a central computer, (3) processing of the information to ascertain the most economical operation conditions, (4) transmission of the control signals to the individual generating stations, (5) servo control of the prime movers and generators, (6) auto-recording of the transmitted information. Computation of the optimum working conditions by analogue models and by dynamic small-scale models is also considered.

P. Collins

Laboratoriya upravlyayushchikh mashin i sistem AN SSSR, chlen-korrespondent
AN SSSR.

BRUK, I.S.

Man and machinery. Tekh.mol.25 no.1:1-5 Ja '57.

(MLRA 10:2)

1. Chlen-korrespondent Akademii nauk SSSR.
(Automatic control)

BRUK, Isaak Semenovich; ZUBKOV, Pavel Izrailevich; KRYUKOV, Adrian Aleksandrovich; LIBKIND, Mark Samuilovich; MARKOVICH, Isaak Moiseyevich; SOVALOV, Solomon, Abramovich; GRIGOR'YEV, Ye.N., red.izd-va; NOVIKOVA, S., tekhn.red.

[Long distance transmission of alternating current] Dal'nie peredachi peremennogo toka. Moskva, Izd-vo Akad. nauk SSSR, 1958. 258 p. (MIRA 11:5)

1. Chlen-korrespondent AN SSSR (for Bruk)
(Electric power distribution)

BRUK, I.S.; MATYUKHIN, N.Ya., inzh.; BELYNSKIY, V.V., inzh.;
IUSIF'YAN, A.G., akademik; KAGAN, B.M., kand.tekhn.nauk;
DOLKART, V.M., inzh.; IOPATO, G.P., inzh.

M-3 small-sized universal electronic digital computer.
Elektrichestvo no.1:49-54 Ja '58. (MIRA 11:2)
(Electronic calculating machines)

BRUK, I.S.

Dynamic models of power systems. Elektrichestvo no.2:19-22 7 '58.
(MIRA 11:2)

1. Chlen-korrespondent AN SSSR.
(Electric networks)

SOV/105-58-7-4/32

AUTHOR: Bruck, I. S., Corresponding Member, Academy of Sciences, USSR

TITLE: Variable Reactors for Long Distance Transmissions (Reguliruyemye reaktory dlya dal'nikh elektroperedach)

PERIODICAL: Elektrichestvo, 1958, Nr 7, pp. 14-19 (USSR)

ABSTRACT: Some problems arising with the application of the idea of a "transversal" compensation by means of reactors, are investigated here. - A voltage in the reference points can be maintained by means of reactors with a sufficient steep function of the reactive current versus voltage. The two methods are combined here in one device for shortening the length of the electric line. For this purpose, a system of two three-phase current transformer groups, the cores of which are magnetized by d.c. according to the circuit diagram given here, was proposed here. The change of the direct magnetizing current makes it possible to displace the working point on the magnetization-curve and thus to change the reactive power Q , which is consumed by the reactor at the given voltage U , as well as to change at the same time also the slope of the characteristic $Q(U)$. - A combination of reactor

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Variable Reactors for Long Distance Transmissions

SOV105-58-7-4/32

and transformer in one equipment has special economical advantages, especially when at the place where the reactor is mounted, a consumer or a source of energy is connected to the line. The characteristic of a reactor the core of which is magnetized by d.c., is, when neglecting the effective losses - only determined by the magnetic characteristic of the core. It is shown that the reactor with magnetization - the highest harmonic vibrations not taken into consideration - adopts the properties of a reactor with a linear characteristic, with a controllable slope. The practical realization of the magnetization of transformers may be carried out in different ways. Here, such a circuit for transformers with grounded neutral conductor is given.

Transformers of the type OD TG - 60 000/220 were tested in March 1956, at the ~~Noginsk~~ (or ~~Novosibirsk~~) Substation of Mosenergo for the purpose of determining the electromagnetic characteristics of large-scale transformers magnetized by direct current and for the purpose of examining the possibility of continuous operation of the transformers with this method of operation. The tests have shown the following:

1) The electromagnetic characteristics of the transformers of the ~~Noginsk~~ Substation correspond when magnetized with d.c.

Card 2/4

Variable Reactors for Long Distance Transmissions

SOV/55-56-7-4/32

on the whole to the theoretical assumptions and to the results obtained by the tests carried out in 1954 at the Hydroelectric Power Station of Mosenergo. 2) In the case of magnetizing the transformers for a short time (10 to 15 minutes) the consumption of wattless power can amount to at least half of the nominal output of the two groups. 3) In the case of continuous operation the consumption of wattless power by the transformers of the type ODTG - 60 000/220 can be increased by means of a magnetization of up to 25 % of their nominal power. A further increase in the magnetization is limited by the heating of the steel girders of the magnetic circuit. Magnetization may also be applied with large-scale autotransformers. At present, works are carried out for the investigation of the influence of the transformer (reactor) with magnetization on the course taken by transient processes in connecting and disconnecting the lines and on the dynamic excess voltages. There are 8 figures, 1 table, and 1 reference, and 1 Soviet reference.

Card 3/4

SOV/105-58-7-4/32

Variable Reactors for Long Distance Transmissions

SUBMITTED: July 29, 1957

1. Transmission lines--Design 2. Reactors--Performance

Card 4/4

BRUK, I.S., otv.red.; SHTYNDOK, G.Yu., red.izd-va; VOJKOVA, V.V.,
tekhn.red.

[Digital technique and calculating devices] TSifrovaya
tekhnika i vychislitel'nye ustroistva. Moskva, 1959. 184 p.
(MIRA 13:1)

1. Akademiya nauk SSSR. Institut elektronnykh upravlyayu-
shchikh mashin. 2. Chlen-korrespondent AN USSR (for Bruk).
(Electronic calculating machines)

SOV/24-59-3-20/33

AUTHOR: Brak, I. S. (Moscow)

TITLE: Design Calculations on Automatic Digital Computers

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1959, Nr 3, pp 141-150 (USSR)

ABSTRACT: The paper outlines a number of problems that have been dealt with in recent years at the Institute of Electronic Control Machines (Academy of Sciences of the USSR). The first concerns a furnace for heating iron billets prior to hot rolling; two distinct forms are compared, one in which the billets are heated from above only, and the other in which the billets are heated from all sides. Fig 1 shows a model of the furnace; the object of the calculations was to produce a furnace combining fuel economy with economy in capital cost while maintaining the highest possible output. Fig 2 shows the temperature distributions corresponding to various heating times. The second example concerns the annealing furnace shown in Fig 3 (which is meant for use with metal strip wound on drums). No precise details of the methods or results are given. Fig 4 is a general functional diagram of the computer units used to solve this problem; the various steps and subroutines are mentioned. Many aspects of the problem could not be dealt with by this relatively simple

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SOV/24-59-3-20/33

Design Calculations on Automatic Digital Computers

system, and so many parameters had to be deduced in other ways. The third example deals with some calculations on details of a hydroelectric station, in which the problems involved structures which were statically indeterminate to a very great extent. The result was to save some 400 tons of alloy steel out of a total of 12 500 tons. Fig 5 illustrates the block diagram of the apparatus used. The last example deals with design calculations for power grids. Fig 6 represents the lines, with intermediate generators, reactive power, and so forth; Fig 7 shows the general block diagram. Fig 8 shows the simplified system corresponding to the Stalingrad-Moscow line; Fig 10 shows a detailed block diagram of the units used

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SOV/24-59-3-20/33

Design Calculations on Automatic Digital Computers

in this calculation. The paper concludes with some general remarks on the time saved in this way, and on the improvements needed in the various units in order to avoid some of the difficulties encountered in the problems above. The paper contains 10 figures.

SUBMITTED: February 23, 1959.

Card 3/3

BRUK, I.S., otv. red.; KLIMOV, V.A., red. izd-va; GOLUB', S.P., tekhn.
red.; LAUT, V.G., tekhn. red.

[Use of electronic calculating machines in economics; transportation problem for linear programming] Primenenie tsifrovyykh vychislitel'nykh mashin v ekonomike; transportnaya zadacha lineinogo programmirovaniya. Moskva, Izd-vo Akad. nauk SSSR, 1962. 67 p.
(MIRA 15:6)

1. Akademiya nauk SSSR. Institut elektronnykh upravlyayushchikh mashin. 2. Chlen-korrespondent Akademii nauk SSSR (for Bruk).
(Linear programming)
(Freight and freightage)

BRUK, I.S.

Concerning the dynamic models of electric power systems.
Elektrichestvo no.1:85-89 Ja '62. (MIRA 14:12)
(Electric machinery—Electromechanical analogies)
(Electric power distribution)
(Electric network analyzers)

BRUK, L.TS.; YEREMIN, B.S.; CHILIKINA, N.D., inzh., red.; MARKIZ,
Yu.L., inzh., red.izd-va; TIKHANOV, A.Ya., tekhn.red.

[Handbook for the electric arc furnace steelmaker]
Spravochnik stalevara dugovoi elektropechi. Moskva,
Mashgiz, 1963. 174 p. (MIRA 17:2)

SOV/127-59-2-16/21

18(5)
AUTHOR:

Bruck, I. Ya.

TITLE:

On Selecting the Dressing Scheme for the **Lisakovskoye Oolite Iron-Ores** (O vybore skhemy obogashcheniya lisakovskikh oolitovykh zheleznykh rud)

PERIODICAL:

Gornyy zhurnal, 1959, Nr 2, pp 69-72 (USSR)

ABSTRACT:

The author criticizes the views of A.G. Gerasimov and P.A. Tatsiyenko expressed in this journal (1958, Nr 11), according to which the combined annealing-magnetic ore-dressing method should be applied to **Lisakovskoye Ores**. After having described the chemical composition and physical qualities of the **Lisakovskoye Hydro-goethite iron ore** (iron percentage between 20 and 40), he proceeds to discuss the 2 dressing ways which may be used at the **Lisakovskoye deposits**: the gravitation-magnetic method and the annealing-magnetic method. He pleads for the first one as it would furnish cheaper concentrates. Yet he recognizes that the entire question must be once more

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SOV/127-59-2-16/21

On Selecting the Dressing Scheme for the ~~Lisakovskoye~~ ~~Obilite~~
Iron-Ores)

agitation machines OT-47, and the separators NIGRI-
2VK-5 furnished 50 to 52% rich concentrates. F.K.
Solomonova collaborated in this research. There
are 2 schemes, 1 table and 2 Soviet references.

ASSOCIATION: Uralmekhanobr/Sverdlovsk

Card 3/3

BRUK, I.Ya.

Letters to the editors. Obog. rud 9 no.4:48-49 '64.

(MIRA 18:5)

1. Ural'skiy nauchno-issledovatel'skiy i proyektnyy institut
obogashcheniya i mekhanicheskoy obrabotki poleznykh iskopayemykh.

USSR/ Miscellaneous - Glass manufacture

Card 1/1 : Pub. 104 - 9/9

Authors : Bruk, K. N.; Gendlin, I. E.; and Popov, V. I.

Title : Machine for removal and grinding of glass edges

Periodical : Stek. i ker. 8, page 32, Aug 1954

Abstract : A new machine for removing and grinding glass edges, first introduced at the Ulan-Udensk Glass Factory, is described. Drawings.

Institution :

Submitted :

BRUK, L.V.

Universal calcinosis of the skin. Sbor.nauch.rab.Bel.nauch.-issl.
kozhno-ven.inst. 6:380-381 '59. (MIRA 13:11)

1. Iz kafedry kozhnykh bolezney Instituta usovershenstvovaniya
vrachey (zav. kafedroy dotsent N.F.Pavlov).
(SKIN--DISEASES)
(CALCIUM IN THE BODY)

BRUK, M.A.; inzhener-kapitan 1-go ranga

Persistence and endurance are also weapons. Mor. sbor. 47 no.9:
21-26 3 '64. (MIRA 18:7)

L 33524-66 EWT(m)/EWP(j)/T IJP(c) RM

ACC NR: AP6015056

(A)

SOURCE CODE: UR/0190/66/008/005/0913/0915

AUTHOR: Bruk, M. A.; Lukhovitskiy, V. I.

ORG: none

TITLE: Correlation between heats of fusion of vinyl monomers and their polymerization capacity in the solid state

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 5, 1966, 913-915

TOPIC TAGS: monomer, polymerization, solid state, ~~vinyl~~ monomer, heat of fusion, VINYL COMPOUND

ABSTRACT: The correlation has been established between the difference in the heats of fusion of vinyl monomers, their hydrogenated analogs, and the capacity of monomers to polymerize in the solid state. A table included in the original article shows the above correlation listing specific monomers, hydrogenated monomer analogs, heats of fusion for both, and their polymerization capacity in the crystalline state. Orig. art. has: 1 figure and 1 table. [NT]

SUB CODE: 11/ SUBM DATE: 24May65/ ORIG REF: 003/ OTH REF: 003

Card 1/1 22

UDC: 66.095.26

BRUK, Moisey Abramovich; RIKHTER, Andrey Aleksandrovich; GOL'TRAF, I.S.,
kand.tekhn.nauk, retsenzent; ZAKHARENKO, B.A., kand.tekhn.nauk,
retsenzent; SULOYEV, A.V., nauchnyy red.; VLASOVA, Z.V., red.;
CHISTYAKOVA, R.K., tekhn. red.

[Operating conditions of marine diesel engines] Rezhimy raboty
sudovykh dizel'ei. Leningrad, Sudpromgiz, 1963. 483 p.

(MIRA 16:6)

(Marine diesel engines)

MAID Nr. 993-6 19 June

RADIATION POLYMERIZATION OF TETRAFLUOROETHYLENE IN THE
SOLID STATE (USSR)

Bruk, M. A., A. D. Abkin, and P. M. Khomikovskiy. IN: Akademiya nauk
SSSR. Doklady, v. 149, no. 6, 21 Apr 1961, 1322-1325.

S/020/63/149/006/014/027

The radiation polymerization of tetrafluoroethylene (TFE) in the solid state has been studied at the Physicochemical Institute imeni L. Yu. Karpov.. Specimens of pure TFE were frozen by immersion in liquid nitrogen and irradiated from a Co^{60} source with an activity of 60,000 g-equiv of Ra or from an electron accelerator with an energy of 1.5 Mev. The yield of the polymers was determined gravimetrically following fast defreezing of irradiated specimens. The EPR spectra were recorded with the use of P3-1301 type devices; the absolute concentrations of radicals were evaluated by comparison of the signal areas of the sample and of a standard with

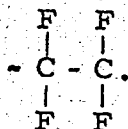
Card 1/2

AID Nr. 993-6 19 June

RADIATION POLYMERIZATION [Cont'd]

S/020/63/149/006/014/027

a known concentration of paramagnetic particles. It was shown that: 1) the initial polymerization rate of TFE in the solid state increases with temperature, attains a maximum near the melting point, and drops sharply after melting; 2) the total activation energy of polymerization is 0.6 kcal/mol in the -196 to -155°C range and 1.6 kcal/mol at -155 to -131°C; 3) rapid annihilation of radicals takes place in the -180 to -140°C range and in the -80 to -50°C range; and 4) the character of the radical annihilation and changes in the EPR spectra observed at low temperatures suggest that these spectra are associated with the radical formed in the monomer, and the spectra observed at -150°C and above, to the radical in the polymer. Finally, it is assumed that the polymer radical has the structure



and is formed in the system as a result of the growth of the polymer chain.

IRAOI

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L 21068-65 EPF(c)/EPF(n)-2/EPR/EWG(j)/EWA(h)/EWP(j)/EWT(m)/T/EWA(1) Pc-4/
Pr-4/PS-4/Pu-4/Peb RPL/AFWL/ASD(m)-3/AS(mp)-2/ESD(gs) GG/RM/WW
ACCESSION NR: AP4044881 S/0020/64/157/006/1399/1402

AUTHOR: Bruk, M. A.; Abkin, A. D.; Khomikovskiy, P. M.; Gol'der, G. A.; Chu-Hsiang-ling

TITLE: Certain questions about the radiation polymerization and copolymerization of tetrafluoroethylene in the solid state /9

SOURCE: AN SSSR. Doklady*, v. 157, no. 6, 1964, 1399-1402

TOPIC TAGS: radiation polymerization, solid state radiation polymerization, polymerization mechanism, tetrafluoroethylene, tetrafluoroethylene trifluorochloroethylene copolymer, luminescence, radical mechanism, ionic mechanism

ABSTRACT: The solid state radiation polymerization of tetrafluoroethylene (TFE) and its radiation copolymerization with trifluorochloroethylene (TFCE) was investigated in order to determine the mechanism of the polymerization reaction. The temperature-polymerization rate curve showed a maximum at -131C, near the monomer melting temperature, and an additional maximum at -160 to -165C, where destruction of radicals, stabilized at lower temperatures, starts. X-rays

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L 21068-65

ACCESSION NR: AP4044881

2

showed no structural change in the -196 to -155 C range, hence the effect at -165 was attributed to the release in the molecular motion in the TFE crystal lattice. By examination of temperature relationships it was also established that the intensity of luminescence was not determined by the destruction of radicals. TFE and TFCE were copolymerized in the gas and liquid phases and in the solid state. In the gas and liquid phase gamma-radiation copolymerizations the product composition was proportional to that of the initial mixtures, i.e., the copolymerization constants were equal to 1. Solid state radiation polymerization was conducted with mixtures containing up to about 60% TFCE which are single phase solid solutions stable to -170C and higher. The copolymers produced at -145 and at -170C using up to 50% TFCE were all greatly enriched in TFE; the copolymerization constants: r_1 (TFE) = 25; r_2 (TFCE) = 0.04. Pure solid (crystalline or amorphous), or liquid (-120C) TFCE could not be polymerized. Addition of a small amount, 1%, of TFCE to TFE sharply reduced the yield of the polymer. It was concluded the radical mechanism of the gas and liquid phase polymerizations did not obtain for the solid state radiation polymerization; the mechanism of the latter was apparently ionic. "The thermoluminescence curve was obtained by V. A. Tochin in the Institute of Chemical Physics AN SSSR. " Orig. art. has: card 2/3

L 21068-65

ACCESSION NR: AP4044881

4 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 02Mar64

ENCL: 00

SUB CODE: GC

NO REF SOV: 003

OTHER: 001

Card 3/3

L 26138-66 EWT(m)/EPF(n)-2/EMP(j)/T/EWA(h)/EWA(l) LJP(c) WW/GC/RM

ACC NR: AP6015061

(A)

SOURCE CODE: UR/0190/66/008/005/0961/0962

AUTHOR: Bruk, M. A.; Gromov, V. F.; Chernyak, I. V.; Khomikovskiy, P. M.; Abkin, A. D.

ORG: None

TITLE: Radiation-induced polymerization of tetrafluoroethylene and acrylonitrile at 4.2 K

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 5, 1966, 961-962

TOPIC TAGS: tetrafluoroethylene, acrylonitrile, bulk polymerization, low temperature polymerization

ABSTRACT: Polymers of tetrafluoroethylene or acrylonitrile have been prepared by bulk radiation-induced polymerization of the monomers at 4.2 K. Molten monomer samples were frozen at a given rate in liquid nitrogen, placed in a cryostat with liquid helium, and irradiated. Defrosting of the samples was conducted under conditions which excluded post-polymerization. The authors assume that in the course of polymerization of the monomers at low temperatures the bulk temperature of the samples does not determine the character of the polymer chain formation, which takes place in "hot" regions. The polymer chains grow before relaxation of the vibration excitation of molecules in "hot" regions has time to occur. The authors also assume that polymerization follows the cooperative mechanism which does not require activation for the addition of individual monomer molecules. Orig. art. has: 1 figure.

SUB CODE: 07, 11/ SUBM DATE: 06Jan66/ ORIG REF: 003/ OTH REF: 001/ ATD PRESS 25/

Card 1/1

BUKANKOV, Ye.l.; KOBRINSKIY, L.S.; KRASNOV, B.Ya.; BRUK, M.B.

High heels for women's shoes made from polypropylene. Kozh.-
otuv. prom. 7 no.5:28-32 My '65. (MIRA 18:8)

BRUK, M. M.

USSR/Medicine - Bee toxin

Card 1/1 Pub. 86 - 22/36

Authors : Kharchenko, N. S., Prof.; and Bruc, M. M., Cand. Med. Sc.

Title : Curative application of bee's poison

Periodical : Priroda 44/6, 110 - 112, Jun 1955.

Abstract : The ancient use of bee's poison as a curative agent is recalled. An account is given of recent experimentation, medical instruction and actual practice in the use of bee's poison. The early use was in the treatment of skin diseases extending even to leprosy and the modern applications are in the realm of rheumatism, neuralgia, and nervous disorders. Illustrations; diagram.

Institution :

Submitted :

BRUK, M.M.

~~*****~~ Fifth conference of the Ukrainian Society of Physiologists, Biochemists,
and Pharmacologists. Problems in pharmacology and toxicology. Fiziol.
zhur. [Ukr.] 2 no.5:140-143 S-O '56. (MLRA 10:1)
(PHARMACOLOGY) (TOXICOLOGY)

KHARCHENKO, N.S., professor; BRUK, M.M., kandidat meditsinskikh nauk.

Poisonous mushrooms. Nauka i zhizn' 23 no.8:29-30 Ag '56.
(Mushrooms, Poisonous) (MIRA 9:9)

BRUK, M.M.

Studying the toxicity and tolerance of unrefined neocide.

Vrach.delo no.3:233-235 Mr'58

(MIRA 11:5)

1. Kafedra farmakologii (zav. - prof. N.S. Kharchenkog) i mikro-
biologii (zav. - chlen-korrespondent AMN SSSR, zasl. deyatel'nauki,
prof. V.S. Derkach) Khar'kovskogo meditsinskogo instituta.
(ANTIBIOTICS)

BRUK, M.M.; RUDENKO, A.I.

Effect of ginseng on basic processes of the higher nervous activity
under experimental conditions. Fiziol. zhur. [Ukr] 4 no.6:834-836
N-D '58. (MIRA 12:3)

1. Khar'kovskiy meditsinskiy institut, kafedra farmakologii.
(GINSENG)

BRUK, M.V., inzh.

Principles of the design of longitudinal and transverse systems
for ultrasonic welding. Trudy LIT no.60:28-32 '64
(MIRA 18:2)

L 3945-66 EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EMA(c) JD/HM

ACCESSION NR: AR5015196

UR/0275/65/000/006/V013/V013
534.232-8

24
B

SOURCE: Ref. zh. Elektronika i yeye primeneniye. Svodnyy tom, Abs. 6V84

AUTHOR: Bruk, M. V.

TITLE: Fundamentals of the calculation of oscillatory systems for ultrasonic welding 16

CITED SOURCE: Sb. Primeneniye ul'trazvuka v mashinostr. Minsk, Nauka i tekhnika, 1964, 170-174

TOPIC TAGS: ultrasonic welding

TRANSLATION: Longitudinally-oscillatory systems suitable for ultrasonic welding are considered. A standing wave should be assumed in the oscillatory system design. The effect of reactive load on the resonance length of the converter and elastic-oscillation concentrator should be determined; also the effect of fixing the rod and its load on the resonance rod length; also the effect of power supplied to the welding zone on the minimal permissible rod diameter; also the effect of rod-material strength on the maximum permissible amplitude of oscillations. Also

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L 3945-66

ACCESSION NR: AR5015196

the mechanical-loss power in the converter, concentrator, and the rod should be determined.

SUB CODE: IE

ENCL: 00

Card 2/2

DP

LEV, Ye.S., kandidat tekhnicheskikh nauk; PETROV, B.A.; BRUK, M.V.

Detection of defects in metals in ship repairing yards. Rech.
transp. 14 no.7:27-29 J1 '55. (MIRA 8:10)
(Metals--Defects) (Magnetic testing)

BRUK, M.V.

PHASE I BOOK EXPLOITATION

SOV/3994

Lev, Yevgeniy Semenovich, Candidate of Technical Sciences, and Marlen Vladimirovich Bruk, Engineer

Primeneniye radioaktivnykh izotopov dlya kontrolya kachestva svarnykh shvov stali malykh tolshchin (Using Radioactive Isotopes For Quality Control of Welded Joints Between Thin Steel Sheets) Leningrad, 1959. 40 p. (Series: Leningradskiy dom nauchno-tekhnicheskoy propagandy. Obmen peredovym opytom. Seriya: Kontrol' kachestva produktsii, vyp. 12/13). 6,500 copies printed.

Sponsoring Agencies: Leningradskiy dom nauchno-tekhnicheskoy propagandy; Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Ed.: S. T. Tyumeneva, Engineer; Tech. Ed.: V. L. Gvirtz.

PURPOSE: This booklet is intended for metallurgists, skilled metalworkers, physicists, structural engineers, and other persons interested in the strength of materials.

Card 1/3

Using Radioactive Isotopes (Cont.)

SOV/3994

COVERAGE: The booklet examines the technical possibility and economic expediency of using soft and medium gamma radiation in the quality control of welded joints between steel sheets 1-15 mm thick. Methods, materials, and technical data are reviewed. The data were compiled by personnel of the LITV Defectoscopy Laboratory to establish criteria for selecting suitable gamma radiation sources to replace less convenient (and often inaccessible) x-ray equipment. No personalities are mentioned. There are 16 figures, 19 tables, and 45 references: 40 Soviet, and 5 English.

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Using Radioactive Isotopes (Cont.)

SOV/3994

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AVAILABLE: Library of Congress

JA/rn/fal
5/8/60

Card 3/3

S/032/60/026/011/034/035
B015/B066

AUTHORS: Lev, Ye. S. and Bruk, M. V.
TITLE: Technical-economic Foundation of an Effective Application of
Isotopes With Soft Radiation for the Quality Control of Weld
Seams 14
PERIODICAL: Zavetskaya laboratoriya, 1960, Vol. 26, No. 11,
pp. 1320-1322 ✓

TEXT: The authors calculated the efficiency and the prime cost in the
quality control by means of gamma-radiography by using the following
isotopes: Se⁷⁵ Te¹²⁷ Eu¹⁵⁵ Tu¹⁷⁰ Ir¹⁹² Co⁶⁰ as well as X-rays. The
efficiency depends on the time which is required for the preparative work
and the control work itself (Table 3). The valuation of efficiency and the
calculation of the costs of gamma-radiography with the above isotopes made
by the authors, as well as practical work led to the conclusion that for
thicknesses of 1 - 15 mm the best results are obtained with Eu¹⁵⁵, that.

Card 1/3

Technical-economic Foundation of an
Effective Application of Isotopes With Soft
Radiation for the Quality Control of Weld Seams

S/032/60/026/011/034/035
B015/B066

however, this isotope is still rather expensive. The isotopes Tu^{170} and Te^{127} have the disadvantage of a short lifetime, but may be recommended for measurements. The gamma-radiographs obtained with Se^{75} are less sensitive than those of the former isotopes. Ir^{192} may be used instead of Se^{75} and for thicknesses of 8-20 mm qualitatively good radiographs are obtained. Here, the sensitivity is 2.5 - 3% and the radiograph is 2.5 to 3.5 times less expensive than that with Se^{75} . For thicknesses of 1 - 5 mm the sensitivity obtained with Ir^{192} is too low and the radiation source has a comparatively short lifetime. The use of the isotopes according to Table 5 is recommended to obtain the maximum sensitivity with different thicknesses of the material. There are 5 tables and 1 Soviet reference. ✓

ASSOCIATION: Leningradskiy institut vodnogo transporta (Leningrad
Institute of Water Transportation)

Card 2/3

Годовая производительность
гаммаграфирования

Изотопы	Количество снимков в год при контроле изделий толщин				
	2 мм	4 мм	6 мм	8 мм	10 мм
Sc ⁷⁵	—	1840	1810	1720	1660
		3070	2840	2700	2520
Te ¹²⁷	1410	1290	1230	1000	—
	2000	1750	1500	1230	—
Eu ¹⁵⁵	1410	1290	1230	1000	—
	2000	1750	1500	1230	—
Tu ¹⁷⁰	1410	1290	1230	1000	—
	2000	1750	1500	1230	—
Ir ¹⁹²	—	1690	1660	1600	1530
	—	2640	2520	2400	2300
Co ⁶⁰	—	—	1400	1400	1380
	—	—	2060	1960	1900

3 Примечание. В числителе даны
цифры при работе одного оператора, в
знаменателе — при работе двух операторов.

S/032/60/026/011/034/035
B015/B066

Legend to Table 3 - Output per year in
gamma-radiography, 1 = isotopes, 2 =
number of radiographs taken per year in
the control of articles of the thickness:
(mm), 3 = the numerator contains the data
for the work of one operator, the
denominator those for two operators.
Table 5 - Isotopes recommended, 1 =
Metal thickness in mm, 2 = isotopes
recommended, 3 = possible exchange, 4 =
exchange less recommendable

Card 3/3

BRUK, Marlen Vladimirovich, inzh.; ACHKINADZE, Sh.D., red.; FOMICHEV, A.G.,
red. izd-va; BELOSUROVA, I.A., tekhn. red.

[Ultrasonic welding of metals] Ul'trazvukovaia svarka metallov; steno-
gramma lektsii. Leningrad, 1961. 46 p. (MIRA 14:7)
(Ultrasonic waves--Industrial applications) (Welding)

L 18584-65 EWT(m)/EPR/EWP(v)/EWP(t)/T/EWP(k)/EWP(b) Pf-L/Ps-L IJP(c)/AFTC(p)/
 ASD(m)-3 MJW/JD/HM/MLK
 ACCESSION NR: AT5001224 S/0000/61/000/000/0104/0118 37
 34
 B+1

AUTHOR: Brak, M. V.

TITLE: Ultrasonic welding of aluminum alloys

SOURCE: Vsesoyuznaya mezhvuzovskaya konferentsiya po promyshlennomu primeneniyu ul'trazvuka. Kuybyshev, 1960. Promyshlennoye primeneniye ul'trazvuka (Industrial application of ultrasound); trudy konferentsii. Kuybyshev, 1961, 104-118

TOPIC TAGS: aluminum alloy, magnesium containing alloy, manganese containing alloy, copper containing alloy, ultrasonic welding

ABSTRACT: Partial results are presented of experimental work at the Leningrad Institut of Water Transport (LITV) on ultrasonic welding of aluminum alloys up to 2 mm thick, and on welding these alloys to thick rolled aluminum and steel stock, castings, and forgings. The LITV has designed and built a laboratory and a semi-industrial unit for ultrasonic spot welding, and developed a technology for welding AMtsM, AMg5VM and D16AT aluminum alloys. The units are equipped with a magnetostriuctive transducer of 700, 2000, or 3000 w capacity operating at

Cord 1/3

L 18584-65

ACCESSION NR: AT5001224

3

a frequency of 19.5 or 22.6 kc. The clamping force varies from 20 to 400 kg and the range of time relay from 0.25 to 3.5 sec. The experiments have shown that the power output, clamping pressure, and holding time are the main parameters that determine the weld quality. In general, an optimal-power value exists for each material of a given thickness. For a material of the same thickness, the weld strength increases with increasing power output. The required clamping force increases with increasing thickness and hardness of aluminum alloys, but only to a definite limit. The optimum holding time was found to vary from 0.5 to 5 sec and to increase linearly with increasing thickness. Sulfidizing and cyaniding of the welding-head contact surfaces is recommended to increase the surface hardness and to prevent welding between the head and the stock. The mean strength per spot weld obtained by ultrasonic welding under optimum welding conditions was 180 kg for AMtsM alloy plates 1.2 mm thick, 220 kg for D16AT plates 1.0 mm thick, and 420 kg for AMg5VM plates 2.0 mm thick. Orig. art. has: 15 figures and 1 table.

ASSOCIATION: none

Cord 2/3

L 18584-65

ACCESSION NR: AT5001224

SUBMITTED: 11May61

NO REF SOV: 000

ENCL: 00

OTHER: 000

○
SUB CODE: MM

ATD PRESS: 3154

Card 3/3

S/137/62/000/007/029/072
A052/A101

AUTHORS: Bruck, M. V., Trifonov, V. N.

TITLE: Calculation of power consumed in the contact zone at ultrasonic welding

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1962, 3, abstract 7E16
("Tr. Leningr. in-ta vodn. transp.", no. 22, 1961, 54 - 61)

TEXT: The relationship is investigated between the consumed power and the displacement of the working tool of the oscillating system of the installation. At the first moment of the input of ultrasonic oscillations a dry friction takes place between the supporting surfaces of waveguides and samples, and thereafter to the welding zone is possible both on account of the friction between the tool and the upper sample and on account of a seizing between them, since the temperature maximum in this contact is reached earlier than in the contact between the samples. At a high temperature, σ_3 of the metal in the contact surface zone of samples drops by several times. Owing to tangential forces the destruction of brittle oxide films and their removal to the periphery of the point take place.

Cont 1/2

Calculation of power consumed in the...

S/137/62/000/007/029/072
A052/A101

The friction goes over into an internal friction of the plastic layer. Plastic deformation contributes to the contact of pure metal surfaces over a large area of the actual contact, thus securing the strength of the joint. It is necessary to know the value of the tangential force developing in the process of welding. The relevant formulas are derived.

V. Fomenko

[Abstracter's note: Complete translation]

34462
S/125/62/000/003/007/008
D040/D113

1.2310

AUTHOR: Bruk, M.V.

TITLE: Distribution of oxide films in the contact zone in ultrasonic welding

PERIODICAL: Avtomaticheskaya svarka, no. 3, 1962, 54-57

TEXT: The motion of artificial oxide film particles in the contact zone in ultrasonic weld joints was studied in experiments with D16AT (D16AT) duralumin anodized with 3-5 μ thick and 450 kg/mm² hard oxide film. Anodized specimens were put on nonanodized specimens and welded by the conventional ultrasonic process with a Y3CM -1 (UZSM-1) welder and an Y3T-10M (UZG-10M) generator. The welding tool had a flat end, 7 mm in diameter. Microscopic investigation revealed concentration of split oxide film particles on the periphery of the welded spot and in the center, and showed that metal had been squeezed out from the middle of the spot, and that the bond stretched from the periphery to the center. It appears that dry

Card 1/3

Distribution of oxide films:...

S/125/62/000/003/007/008
D040/D113

friction at the start of the process heats and softens the metal, and gradually turns into internal friction in the metal. It is supposed that predominantly turbulent plastic deformation helps join the contact and the bond between the surfaces, and that the tangential forces forming in the process are much higher than the contact pressure. An electron-microscope photograph of an ultrasonic weld on ~~AMr~~ 5BM (AMg5VM) alloy with natural oxide films is included as an example confirming the experimental data. ✓
Conclusions: (1) Contact pressure causes the oxide films to crack up over the entire contact area. (2) The oxide films are removed together with a portion of metal mainly due to tangential forces. (3) Granulated films are concentrated on the periphery of the welded spot. (4) A part of the oxide films can remain in the welding zone; this reduces the strength of the bond. (5) Some plastic deformation is necessary in order to bring the metal surfaces into contact, and turbulent deformation improves the contact. (6) The described experiments confirmed that aluminum alloys can be welded through an anodized layer. There are 5 figures and 6 references: 5 Soviet and 1 non-Soviet bloc. The English-language reference is:

Card 2/3

Distribution of oxide films ...

S/125/62/000/003/007/008
D040/D113

B.E. Noltingk, Ultrasonic Welding, "Welding and Metal Fabrication", no. 7, 1960.

ASSOCIATION: Leningradskiy institut vodnogo transporta (Leningrad Water Transport Institute)

SUBMITTED: June 9, 1961

Card 3/3

KHOLOPOV, Yuriy Vasil'yevich; BRUK, M.V., red.

[Technology of ultrasonic welding] Tekhnologiya ul'tra-zvukovoi svarki. Leningrad, 1965. 24 p. (MIRA 18:5)

BRUK, O.L.

Generalized method for calculating the multistage countercurrent
washing of precipitates. Khim.prom. no.8:660-666 D '60.
(MIRA 13:12)

1. Nauchno-issledovatel'skiy institut ugleobogashcheniya.
(Precipitation (Chemistry))

BRUK, O.L.

Graphic method of computation and the experimental investigation of a multistage countercurrent washing of precipitates. Khim.prom. no.9:596-601 Ag '62. (MIRA 15:9)

1. Gosudarstvennyy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut po obogashcheniyu i briketirovaniyu ugley.

(Chemistry, Technical)
(Leaching)

BRUK, O.L., inzh.; KAMINSKIY, V.S., kand.tekhn.nauk; SHTEYNBERG, D.I.

Filtration and washing of flotation products of fine coal in heavy liquids. Obog. i brik.ugl. no.28:31-37 '62. (MIRA 17:4)

KAMINSKIY, V.S., kand.tekhn.nauk; SOKOLOVA, M.S., kand.tekhn.nauk;
BRUK, O.L., inzh.; KORSAK, L.L., inzh.

Study of the adsorption of calcium chloride by the products of
gravity preparation of coals using the radioisotope method.
Obog.i prik.ugl. no.30:65-70 '63. (MIRA 17:4)

BRUK, O.L., inzh; DODIN, N.P., inzh; KAMINSKIY, V.S., kand. tekhn. nauk

Residue centrifuges for the reflux washing of residues.

Khim. i nef. mashinostr. no.2:4-7 Ag '64 (MIRA 18:1)

BRUK, O.L.

Multistage countercurrent washing of precipitates with an intermediate
drawing off of wash waters. Khim. prom. no.5:371-375 My '64.
(MIRA 17:9)

BRUK, O.L.

Studying the countercurrent washing of residues in worm type
settling and washing centrifuges. Khim. prom. 41 no.10:778-
782 0 '65. (MIRA 18:11)

1. Institut goryuchikh iskopayemykh.

Bruk, R.

Slate clay as a slag forming additive in the steel industry. p. 374.
HUTNIK. (Ministerstvo hutniho prumyslu a rudnych dolu) Praha.
Vol. 4, no. 12, Dec. 1954.

Source: EFAL LC Vol. 5, No. 10 Oct. 1956

BRUK, R.

TECHNOLOGY

periodicals: HUTNIK Vol, 9, no.1, Jan. 1959

BRUK, R. Problem of increasing durability of chromemagnesite archese in open-hearth furnaces. p. 3.

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 5
May 1959, Unclass.

BRUK, S.

BRUK, S.; OLJIC, S. "Application of A. T. Ippen's theory of supercritical flow in the calculation of steep chutes."

Elektroprivreda, Beograd, Vol 7, No 3, May/June 1954, p. 122

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

- BRUK, STEAN, ing.-

Analysis and determination of the flow over a curved brim. Vodoprivreda
Jug 2 no.7/8:258-265 '59. (EEAI 10:1)

1. Hidrotehnicki institut "Ing. Jaroslav Cerni," Beograd.
(Dams) (Water) (Floods)

BRUK, Stevan, ing. (Beograd, Dusana Bogdanovica 2); BATINIC, Nikola, ing.
(Beograd, Svetog Save 32/II) .

Regulation of the Danube River near Veliko Ratno Ostrvo. Brodarstvo 3
no. 5/6:202-207 0 59 - Mr 60.

BRIJK, S.K.

Brushless bottle washing machine. Trudy LTIKHP 5:129-135 '54.
(Bottle washing) (MIRA 11:3)